

Patent claims

1. A cage (1) for inclined ball bearings (9) having ball pockets (3) which are adjacent to one another on the circumferential side about a rotational axis (2) of the cage (1), the cage (1) having the following features:

- the ball pockets (3) are delimited on the circumferential side by webs (4),
- the ball pockets (3) are delimited, in at least one axial direction of the cage (1), in each case by a side wall (5) having an approximately uniform wall thickness,
- the side walls (5) are arched, starting from the webs (4), at least in the axial direction,
- in each case one rib (7) emanates in the axial direction from one of the webs (4) and connects two of the side walls (5) to one another on the circumferential side, and
- each of the ribs (7) protrudes here in the axial direction from the web (4) at most to the same extent as the side walls (5) are arched, starting from the web (4), in the axial direction.

2. The cage as claimed in claim 1, in which the ribs (7) between the side walls (5) are oriented in the circumferential direction and extend in a curved manner in the circumferential direction.

3. The cage as claimed in claim 2, having gaps (6) between the arched side walls (5), each of the gaps (6) being delimited radially toward the rotational axis (2) by one of the ribs (7).

4. The cage as claimed in claim 3, having a rib face (7a) which faces the rotational axis (2) on each of the ribs (7), all arbitrary points of the rib face (7a) being

spaced apart radially to the same extent from the rotational axis (2) of the cage (1), and the rib face (7a) widening in the circumferential direction with an increasing axial spacing from one of the webs (4).

5. The cage as claimed in claim 1, 2, 3 or 4, in which the greatest radial spacing of the ribs (7) from the rotational axis (2) is at most as great as the smallest radial spacing of each of the webs (4) from the rotational axis (2).

6. The cage as claimed in claim 1, having a side rim (17) which runs on the circumferential side, the side rim (17) delimiting the ball pockets (3) in the opposite direction of the axial direction.

7. The cage as claimed in claim 6, in which the smallest radial spacing of the side rim (17) from the rotational axis (2) of the cage (1) is greater than the greatest radial spacing of the side walls (5) from the rotational axis (2).

8. The cage as claimed in claim 1, having retaining lugs (10) which are resilient in a sprung manner for axially securing the cage (1) in an annular groove (13) on an inner ring (11), each of the retaining lugs (10) protruding from one of the side walls (5) and being adjacent on the circumferential side to a further retaining lug (10).

9. The cage as claimed in claim 8, having grooves (18), the wall thickness of the side walls (5) being reduced by one groove (18) each, and each of the grooves (18) being delimited in the direction of the rotational axis (2) by one of the retaining lugs (10) and, on the side of the ball pockets (3), by one of the side walls (5).

10. The cage as claimed in claim 9, in which the groove (18), as viewed in a longitudinal section along the rotational axis (2) of the cage (1), is described by a radius.

11. The cage as claimed in claim 9, in which each of the grooves (18) is delimited radially to the outside proportionately by one of the side walls (5) and by two of the ribs (7) which are separated from one another in the circumferential direction by means of one of the side walls (5).

12. The cage as claimed in claim 9, in which the grooves (18) are delimited partially, in pairs radially to the outside, together by at least one of the ribs (7).

13. The cage as claimed in claim 8 or 9, in which the retaining lugs (10) protrude in the axial direction at most to the extent that the side walls (5) protrude at most in the axial direction starting from the web (4).

14. The cage as claimed in claim 8, 12 or 13, having circumferential gaps (16) on the circumferential side between the retaining lugs (10), each of the circumferential gaps (16) being delimited radially to the outside partially by one of the webs (4) and by one of the ribs (7).

15. The cage as claimed in claim 8, in which flanks (14), which face in the circumferential directions, of the retaining lugs (10) extend in an inclined manner with respect to one another.

16. The cage as claimed in claim 15, in which the spacing between flanks (14), which face one another over a circumferential gap (16), of mutually adjacent retaining lugs (10) increases in the direction of the rotational axis (2).

17. The cage as claimed in claim 15 or 16, in which the flanks (14) are inclined by an angle with respect to an imaginary plane (15) which emanates from the rotational axis (2) and is aligned with the rotational axis (2).